

ELECTROPLATED INTERCONNECTION STRUCTURES  
ON INTEGRATED CIRCUIT CHIPS

Abstract of the Disclosure

A process is described for the fabrication of submicron interconnect structures for integrated circuit chips. Void-free and seamless conductors are obtained by electroplating Cu from baths that contain additives and are conventionally used to 5 deposit level, bright, ductile, and low-stress Cu metal. The capability of this method to superfill features without leaving voids or seams is unique and superior to that of other deposition approaches. The electromigration resistance of structures making use of Cu electroplated in this manner is superior to the 10 electromigration resistance of AlCu structures or structures fabricated using Cu deposited by methods other than electroplating.